

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Bing-Yan Zhu et al.

Application No.: Not Yet Assigned

Filed: Herewith

For: BENZAMIDES AND RELATED  
INHIBITORS OF FACTOR XA

Customer No. 20350

Examiner:

Technology Center/Art Unit:

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR §1.97 and  
§1.98

Mail Stop: Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

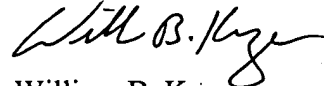
The references cited on attached forms PTO/SB/08A, PTO/SB/08B, PTO 1449 and PTO 892 are being called to the attention of the Examiner. In accordance with 37 CFR §1.98(d), copies of the references can be found in Application No. 10/126,976, filed 04/22/2002 (Attorney Docket No. 021390-004040). It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



William B. Kezer  
Reg. No. 37,369

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 925-472-5000  
Fax: 925-472-8895  
WBK:jkh  
60061068 v1

<b>Notic of R ferences Cited</b>	Application/Control No.	Applicant(s)/Patent Under Reexamination ZHU ET AL.	
	Examiner	Art Unit	Page 1 of 1

## U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,376,515	04-2002	Zhu et al.	514/318
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
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## FOREIGN PATENT DOCUMENTS

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	N					
	O					
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## NON-PATENT DOCUMENTS

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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete If Known</b>		
				Application Number		
				Filing Date		
				First Named Inventor		
				Art Unit		
				Examiner Name		
Page	1	of	1	Attorney Docket Number		021390-004041

U.S. PATENT DOCUMENTS					
Examiner	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>2</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	AA	WO	99/42439	A1	08/26/1999	Roche Diagnostics GmbH		<input type="checkbox"/>
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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>

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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

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WC 9056436 v1

<b>INFORMATION DISCLOSURE CITATION</b>  (Use several sheets if necessary)  <b>PTO Form 1449</b>				Attorney Docket No.: 021390-004041		Application No.:	
				Applicants: Bing-Yan ZHU et al.			
				Filing Date:		Group:	

U.S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Sub Class	Filing Date

FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Sub Class	Translation Yes No	
		0 937 711 A1	25 August 1999	Europe				X

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
	Michael R. Wiley et al., "Structure-Based Design of Potent, Amidine-Derived Inhibitors of Factor Xa: Evaluation of Selectively, Anticoagulant Activity, and Antithrombotic Activity", <u>J. Med. Chem.</u> , Vol. 43, pp. 883-899 (2000).
	Ying K. Yee et al., "N <sup>2</sup> -Aroylanthranilamide Inhibitors of Human Factor Xa", <u>J. Med. Chem.</u> , Vol. 43, pp. 873-882 (2000).
	David K. Herron et al., "1,2-Dibenzamidobenzene Inhibitors of Human Factor Xa", <u>J. Med. Chem.</u> , Vol. 43, pp. 859-872 (2000).
	W. E. Bachmann et al., "Reduction by Magnesium + Magnesium Halide, XIII. The Reaction Between Epoxy Ketones and Grignard Reagents", <u>Journal of the American Chemical Society</u> , Vol. 56, No. 7, pp. 1559-1560 (1934).
	Takashi Keumi et al., "2-(Trifluoromethylsulfonyloxy)pyridine as a Reagent for the Ketone Synthesis from Carboxylic Acids and Aromatic Hydrocarbons", <u>Bull. Chem. Soc. Jpn.</u> , Vol. 61, No. 2, pp. 455-459 (1988).
	"Dictionary of Organic Compounds, 5th Ed., Vol. 5," Chapman and Hall, New York, NY, US (1982), compounds T-00160, T-00161, T-00162, p. 5119 (1982).
	Herbert J. Sipe, Jr. et al., "An Improved Synthesis of Aryl Sulfones", <u>Synthesis</u> , No. 3, pp. 283-284 (1984).
	Richard Kuhn et al., "Addition von Maleinsäure-anhydrid an Polyene. (Über konjugierte Doppelbindungen, XIV," <u>Berichte Der Deutschen Chemischen Gesellschaft</u> , Vol. 63, pp. 2662-2679 (1930).
Examiner <span style="float: right;">Date Considered</span>	

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<b>Notice of References Cited</b>	Applicant/Patent Zhu et al.	Application/Control No.	
	Examiner	Art Unit	Page 1 of 1

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## FOREIGN PATENT DOCUMENTS

	Document Number Country Code-Number-Kind Code	Date MM-YYYY <sup>1</sup>	Country	Name	Classification <sup>2</sup>
N	GB 2,220,206 A	1/1990	GB	Otsuka Pharm	----
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P					
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## NON-PATENT DOCUMENTS

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	Examiner	Art Unit	Page 1 of 1	

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## FOREIGN PATENT DOCUMENTS

	Document Number Country Code-Number-Kind Code	Date MM-YYYY <sup>1</sup>	Country	Name	Classification <sup>2</sup>
N	EP 077,534	4/1983	Europe	Honda	----
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## NON-PATENT DOCUMENTS

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<b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)  <b>PTO Form 1449</b>	<b>Attorney Docket No.</b> 021390-004041	<b>Application No.</b>
	<b>Applicants:</b> Bing-Yan ZHU <i>et al.</i>	
	<b>Filing Date:</b>	<b>Group Art Unit:</b>

**U.S. PATENT DOCUMENTS**

*Examiner Initial	Document Number	Date	Name	Class	Sub Class	Filing Date
	4,514,416	April 30, 1985	Fujii et al.	549	442	
	4,971,957	November 20, 1990	Tsutsumi et al.	514	79	
	4,912,001	March 27, 1990	Kouno et al.	430	71	
	5,569,768	October 29, 1996	Boyd et al.	548	253	
	5,576,343	November 19, 1996	Nagahara et al.	514	422	
	5,872,115	February 16, 1999	Binet et al.	514	211	
	6,140,351	October 31, 2000	Arnaiz et al.	514	336	

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	John D. Young <i>et al.</i> , "Interannular Interactions in Para-Substituted Diphenylmethane Anion Radicals," <u>J. Am. Chem. Soc.</u> , 94:25, December 1972
	Hitomi Suzuki <i>et al.</i> , "Selective Reduction with Lithium Aluminum Hydride/Diphosphorus Tetraiodide. A Mild Conversion of Aromatic Ketones to Parent Hydrocarbons," <u>Chemistry Letters</u> , pp. 909-910, 1983.
	St. Goldschmidt and P. Modderman, "Biphenyl Derivatives II. Basic 4-Biphenyl Compounds," <u>Recueil</u> , 69, 1109-1117 (1950).
	W. F. Cockburn <i>et al.</i> , "Molecular Rearrangement of Tertiary Amines. Part I.," <u>J. Chem. Soc.</u> , No. 8, pp. 3340-3346 (1960).
	Hamilton, A., "Intra- and Intermolecular Hydrogen Bonding Control of Supramolecular Structure," <u>NATO ASI Ser., Ser. C. (Computational Approaches In Supramolecular Chemistry)</u> Vol. 426, 101-8, (1994).
	El-Nagdy, S., <u>Asian J. Chem.</u> 2(4):368-78 (1990).
	Kulkarni, <u>J. Indian Chem. Soc.</u> 61(8):720-1 (1984)

Examiner	Date Considered
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	<b>Filing Date:</b>	<b>Group Art Unit:</b>

**FOREIGN PATENT DOCUMENTS**

		Document Number	Date Day/Mo/Yr	Country	Class	Sub Class	Translation	
							YES	NO
		540 051 A1	05/05/1993	EP				
		418,675	06/07/1992	JP (w/English Abstract)				X
		59-181257	15/10/1984	JP(w/English Abstract)				X
		11302177	02/11/1999	JP(w/English Abstract)				X

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

		Hey, D., <u>J. Chem. Soc.</u> 16, 1513-18 (1967).
		El-Zanfally, S., <u>Egypt. J. Pharm. Sci.</u> Vol. 17(1), 29-34 (1978).
		Bing-Yan Zhu et al., <u>Annual Reports in Medicinal Chemistry</u> , 35, pp. 83-102 (2000).

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	<b>Filing Date:</b>	<b>Group Art Unit:</b>

**FOREIGN PATENT DOCUMENTS**

		Document Number	Date Day/Mo/Yr	Country	Class	Sub Class	Translation	
							YES	NO
		96/28427	19 September 1996	WO				
		97/29067	14 August 1997	WO				
		98/06694	19 February 1998	WO				
		98/09630	12 March 1998	WO				
		98/28269	2 July 1998	WO				
		98/28282	2 July 1998	WO				
		98/57934	23 December 1998	WO				
		99/00121	7 January 1999	WO				
		99/00126	7 January 1999	WO				
		99/00127	7 January 1999	WO				
		99/00128	7 January 1999	WO				
		99/32477	1 July 1999	WO				
		00/34237	15 June 2000	WO				
		00/34238	15 June 2000	WO				
		00/34258	15 June 2000	WO				
		00/34260	15 June 2000	WO				
		00/34261	15 June 2000	WO				
		00/34268	15 June 2000	WO				
		00/34269	15 June 2000	WO				
		00/39118	6 July 2000	WO				

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